

JUL 12 2001

SHEET 1 OF 6

INFORMATION DISCLOSURE CITATION

PTO-1449

ATTORNEY'S DKT NO.
015290-508APPLICATION NO.
09/775,664APPLICANT
Paul SHUFFLEBOTHAM et al.FILING DATE
February 5, 2001GROUP
~~Unassigned~~ 1763

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>RA</i>	4,173,661	11/06/79	Bourdon	438	485	
<i>RA</i>	4,270,999	06/02/81	Hassan et al.	204	192.32	
<i>RA</i>	4,340,462	07/20/82	Koch	204	298.33	
<i>RA</i>	4,512,283	04/23/85	Bonifield et al.	118	723	
<i>RA</i>	4,539,068	09/03/85	Takagi et al.	427	570	
<i>RA</i>	4,579,618	04/01/86	Celestineo et al.	156	345	
<i>RA</i>	4,614,639	09/30/86	Hegedus	422	186.05	
<i>RA</i>	4,690,746	09/01/87	McInerney et al.	204	192.32	
<i>RA</i>	4,691,662	09/08/87	Roppel et al.	118	50.1	
<i>RA</i>	4,732,761	03/22/88	Machida et al.	438	695	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
<i>RA</i>	0440154	08/07/91	Europe				
<i>RA</i>	0489407	06/10/92	Europe				
<i>RA</i>	0520519	12/30/92	Europe				
<i>RA</i>	0641013	03/01/95	Europe				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>RA</i>	"Fundamentals, Etching, Deposition, and Surface Interactions", by Stephen M. Rossnagel et al., <u>Handbook of Plasma Processing Technology</u> , (1989), pp. 233-306.
<i>RA</i>	"Electron cyclotron resonance microwave discharges for etching and thin-film deposition", by Jes Asmussen, <u>J. Vac. Sci. Technol. A</u> , Vol. 7, No. 3, (May/June 1989), pp. 883-893, New York, NY.
<i>RA</i>	Qian, L.Q., et al., "High Density Plasma Deposition and Deep Submicron Gap Fill with Low Dielectric Constant SiOF Films" <u>DUMIC Conference</u> , Feb. 21-22, 1995, 1995 ISMIC - 101D/95/0050, pp. 50-56.
<i>RA</i>	Shufflebotham, P. et al., "Biased Electron Cyclotron Resonance Chemical-Vapor Deposition of Silicon Dioxide Inter-Metal Dielectric Thin Films" <u>Materials Science Forum</u> , vol. 140-142 (1993) pp. 255-268, Switzerland.

EXAMINER

DATE CONSIDERED

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SHEET 2 OF 6

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U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
RA	4,806,321	02/21/89	Nishizawa et al.	118	666	
RA	4,854,263	08/08/89	Chang et al.	118	715	
RA	4,877,641	10/31/89	Dory	427	574	
RA	4,913,929	04/03/90	Moslehi et al.	427	564	
RA	4,919,745	04/24/90	Fukuta et al.	156	343	
RA	4,943,345	07/24/90	Asmussen et al.	216	69	
RA	4,948,458	08/14/90	Ogle	438	729	
RA	4,980,204	12/25/90	Fujii et al.	117	98	
RA	4,992,301	02/12/91	Shishiguchi et al.	118	724	
RA	4,996,077	02/26/91	Moslehi et al.	427	562	
RA	5,013,691	05/07/91	Lorey et al.	438	789	
RA	5,089,442	02/18/92	Olmer	438	631	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
RA	0674336	09/27/95	Europe				
RA	0676790	10/11/95	Europe				
RA	0676793	10/11/95	Europe				
RA	0637058	02/01/95	Europe				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

RA	"Silicon dioxide trench filling process in a radio-frequency hollow cathode reactor", by M. Gross et al., <u>J. Vac. Sci. Technol. B.</u> , Vol. 11(2), (March/April 1993), pp. 242-248, Triangle Park, North Carolina.
RA	"Low-temperature deposition of silicon dioxide films from electron cyclotron resonant microwave plasmas", by T.V. Herak et al., <u>J. Appl. Phys.</u> , 65(6), (March 15, 1989), pp. 2457-2463, New York, New York.
RA	"New approach to low temperature deposition of high-quality thin films by electron cyclotron resonance microwave plasmas", by T.T. Chau et al., <u>J. Vac. Sci. Technol. B.</u> , Vol. 10(5) (Sep./Oct. 1992), pp. 2170-2178, New York, New York.

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SHEET 3 OF 6

INFORMATION DISCLOSURE CITATION				ATTORNEY'S DKT NO. 015290-508		APPLICATION NO. 09/775,664	
PTO-1449				APPLICANT Paul SHUFFLEBOTHAM et al.		FILING DATE February 5, 2001	
				GROUP Unassigned		1763	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
RD	5,105,761	04/21/92	Charlet et al.	118	723		
RD	5,124,014	06/23/92	Foo et al.	438	694		
RD	5,134,965	08/04/92	Tokuda et al.	118	723		
RD	5,164,040	11/17/92	Eres et al.	427	600		
RD	5,169,509	12/08/92	Latz et al.	204	298		
RD	5,182,221	01/26/93	Sato	438	424		
RD	5,192,370	03/09/93	Oda et al.	118	723R		
RD	5,200,232	04/06/93	Tappan et al.	427	569		
RD	5,231,334	07/27/93	Paranjpe	315	111.21		
RD	5,252,133	10/12/93	Miyazaki et al.	118	725		
RD	5,262,029	11/16/93	Erskine et al.	204	298.15		
RD	5,267,607	12/07/93	Wada	165	82-1		
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
RD	0709875	05/01/96	Europe				
RD	7-297139	11/10/95	Japan			Abstract Only	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
RD	Webb, D.A., et al., "Silicon Dioxide Films Produced by PECVD of TEOS and TMCTS", 10439 <i>Proceedings of the Int. Symp. on Ultra Large Scale Integration Science and Technology</i> , (1989) No. 9, Pennington, New Jersey.						
RD	Fukada, T. et al., "Preparation of SiOF Films with Low Dielectric Constant by ECR Plasma CVD" <i>DUMIC Conference</i> , Feb. 21-22, 1995, 1995 ISMIC - 101D/95/0043, pp. 43-46, Bunkyo-ku, Tokyo Japan.						
RD	"Electron Cyclotron Resonance Microwave Discharges For Etching and Thin Film Deposition", by Jes Asmussen, <i>Handbook of Plasma Processing Technology</i> , May 1990, pp.285-307, Park Ridge, New Jersey.						
EXAMINER: <i>Paul Shufflesbotham</i>				DATE CONSIDERED: <i>March 6, 2001</i>			

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SHEET 4 OF 6

INFORMATION DISCLOSURE CITATION

PTO-1449

ATTORNEY'S DKT NO.
015290-508APPLICATION NO.
09/775,664APPLICANT
Paul SHUFFLEBOTHAM et al.FILING DATE
February 5, 2001GROUP
~~Unassigned~~ 1703

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>DB</i>	5,279,865	01/18/94	Chebi et al.	427	574	
<i>DB</i>	5,280,154	01/18/94	Cuomo et al.	219	121.52	
<i>DB</i>	5,286,518	02/15/94	Cain et al.	427	96	
<i>DB</i>	5,346,578	09/13/94	Benzing et al.	156	345	
<i>DB</i>	5,368,710	11/29/94	Chen et al.	201	192.320	
<i>DB</i>	5,384,008	01/24/95	Sinha et al.	438	694	
<i>DB</i>	5,399,387	03/21/95	Law et al.	427	574	
<i>DB</i>	5,401,350	03/28/95	Patrick et al.	156	345	
<i>DB</i>	5,405,480	04/11/95	Benzing et al.	156	345	
<i>DB</i>	5,415,728	05/16/95	Hasegawa et al.	438	710	
<i>DB</i>	5,498,313	03/12/96	Bailey et al.	438	710	
<i>DB</i>	5,522,934	06/04/96	Suzuki et al.	118	723AN	
<i>DB</i>	5,522,936	06/04/96	Tamura	118	723R	
<i>DB</i>	5,525,159	06/11/96	Hama et al.	118	723I	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
<i>DB</i>	96/25023	08/15/96	WIPO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

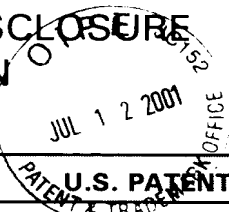
<i>DB</i>	Hewes, K. et al., "An Evaluation of Fluorine Doped PETEOS on Gap Fill Ability and Film Characterization" Texas Instruments, Dallas Texas.
<i>DB</i>	Shapiro, M.J., et al., "Dual Frequency Plasma CVD Fluorosilicate Glass Water Absorption and Stability" <i>DUMIC Conference</i> , February 21-22, 1995; 1994 ISMIC-101D/95/118, pp. 118-123.
<i>DB</i>	Miyajima, H. et al., "Water-absorption mechanisms of F-doped PECVD SiO ₂ with low-dielectric constant" <i>VMIC Conference</i> , June 27-29, 1995; 1995 ISMIC-104/95/391, pp. 391-393.
EXAMINER	DATE CONSIDERED
<i>DB</i>	November 6, 2001

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SHEET 5 OF 6

(03/01)

INFORMATION DISCLOSURE CITATION				ATTORNEY'S DKT NO. 015290-508		APPLICATION NO. 09/775,664	
PTO-1449				APPLICANT Paul SHUFFLEBOTHAM et al.			
				FILING DATE February 5, 2001		GROUP Unassigned 1-763	



U.S. PATENT DOCUMENTS						
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>DE</i>	5,529,657	06/25/96	Ishii	156	396	
<i>DE</i>	5,531,834	07/02/96	Ishizuka et al.	118	723E	
<i>DE</i>	5,552,124	09/03/96	Su	156	346	
<i>DE</i>	5,556,521	09/17/96	Ghabari	204	1923B	
<i>DE</i>	5,571,571	11/05/96	Musaka et al.	427	590	
<i>DE</i>	5,605,599	02/25/97	Benzing et al.	438	729	
<i>DE</i>	5,614,055	03/25/97	Fairbairn et al.	156	345	
<i>DE</i>	5,616,519	04/01/97	Ping	438	626	
<i>DE</i>	5,628,829	05/13/97	Foster et al.	118	723E	
<i>DE</i>	5,643,640	07/01/97	Chakravarti et al.	427	378	
<i>DE</i>	5,653,806	08/05/97	Van Buskirk	118	715	
<i>DE</i>	5,661,093	08/26/97	Ravi et al.	438	763	
<i>DE</i>	5,679,606	10/21/97	Wang et al.	438	763	
<i>DE</i>	5,686,356	11/11/97	Jain et al.	438	624	

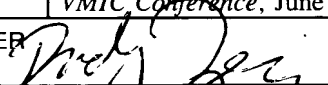
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
<i>DE</i>	98/28465	07/02/98	WIPO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
<i>DE</i>	Yeh, C.F., "Controlling Fluorine Concentration and Thermal Annealing Effect on Liquid-Phase Deposited SiO _{2-x} F _x Films" <i>J. of Electrochem. Soc.</i> , Vol. 132, No. 10, October 1995, pp. 3579-3583, Pennington, New Jersey.
<i>DE</i>	Kuo, Y., "Reactive Ion etching technology in thin-film-transistor processing" <i>IBM J. Res. Develop.</i> , Vol 36, No. 1, January 1992, pp. 69-75, Armonk, New York.

EXAMINER <i>Puck Zeng</i>	DATE CONSIDERED <i>November 6, 2001</i>
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 JUL 12 2001
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INFORMATION DISCLOSURE CITATION PTO-1449				ATTORNEY'S DKT NO. 015290-508		APPLICATION NO. 09/775,664	
				APPLICANT Paul SHUFFLEBOTHAM et al.			
				FILING DATE February 5, 2001		GROUP Unassigned 1763	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
DD	5,723,386	03/03/98	Ishikawa	438	787A		
DD	5,744,400	04/28/98	Dyer	438	63L		
DD	5,753,564	05/19/98	Fukada	438	684		
DD	5,776,834	07/07/98	Avanzio et al.	438	692		
DD	5,783,492	07/21/98	Higuchi et al.	438	710		
DD	5,789,314	08/04/98	Yen et al.	438	622		
DD	5,835,334	11/10/98	McMillin et al.	361	734		
DD	5,858,876	01/12/99	Chew	438	695		
DD	5,916,820	06/29/99	Okumura et al.	438	684		
DD	6,184,158	02/06/01	Shufflebotham et al.	438	788		
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
DD	Spindler O., et al., <i>In Situ</i> Planarization of Intermetal Dielectrics: Process Steps. Degree of Planarization and Film Properties, Thin Solid Films, 175, No. 1, August 1989, pp. 67-72, Lausanne 1, Switzerland.						
DD	D. Carl et al., "Comparison of PECVD F-TEOS Films and High Density Plasma SiOF Films" VMIC Conference, June 27-29, 1995, 1995 ISMIC-104/95/0097, pp. 97-103.						
EXAMINER				DATE CONSIDERED			
				November 6, 2001			

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